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ASSESSMENT OF HIV PREVALENCE AMONG FISTULA PATIENTS AND FACTORS AFFECTING OUTCOME OF FISTULA REPAIR AT BAHIRDAR HAMLIN FISTULA CENTER

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List of Abbreviation

AAFH	Addis Abeba Fistula Hospital
BHFC	Bahirdar Hamlin Fistula Center
ANC	Ante-Natal care
ANRS	Amhara National Regional state
B/Dar	Bahirdar
BMI	Body Mass Index
EDHS	Ethiopian Demographic and Health Survey
FGM	Female Genital Mutilation
MDG	Millennium Development Goal
OF	Obstetric Fistula
RVF	Recto Vaginal Fístula
SSA	Sub-Saharan Africa
TTBA	Trained Traditional Birth Attendant
TBA	Traditional Birth Attendant
VVF	Vesico Vaginal Fistula
WHO	World Health Organization
HIV	Human Immunodeficiency Virus
AIDS	Acquired immunodeficiency syndrome

Abstract

Introduction

Although Women with fistula may be sexually active; HIV counseling is often not included in fistula treatment. There are very few studies looking at their associated medical conditions and other factors in relation with outcome of surgical repair of fistula

Objective: The objectives of the study were to determine the prevalence of HIV among fistula patients and factors affecting outcome of fistula repair at Bahirdar Hamlin Fistula Center

Methods: Institution based prospective cross sectional study design was conducted at Bahirdar Hamlin Fistula Center from June 2010 to October 2010, 206 patients were examined with vesicovaginal, Rectovaginal fistulas and no previous repair. Relevant data were collected from the patient and patient's card for all who were volunteers to participate in the study. Bivarate and multivariate regression model were employed to verify the association between selected socio-demographic characteristics, HIV positive test result and outcomes of fistula repair.

Result: The seroprevalence of HIV infection was 2.4%. Of all VVF operations, 170 (90.4 %) were successful (closed) and 18 (9.6 %) were failed (not closed). From 25 RVF cases, 22(88 %) were successful (closed) and 3(12%) were failed (not closed). In multivariate regression shows age from 25-34 of urinary fistula patients had a significant association with failed urinary fistula operation. (P-value <0.05)
Conclusion and Recommendation: The initial repair of vesicovaginal fistulas has the highest probability of success and the failure rate of repair was related with age. The prevalence of HIV infection among fistula patients was2.4%, this is in line with the national HIV prevalence among pregnant women attending ANC clinics in rural area (2.5%) in 2007.

Introduction

AIDS continues to be a major global health priority. Although important progress has been achieved in preventing new HIV infections and in lowering the annual number of AIDS-related deaths, the number of people living with HIV continues to increase.

In 2008, an estimated 2.7 million new HIV infections occurred. It is estimated that 2 million deaths due to AIDS-related illnesses occurred worldwide in 2008. Sub-Saharan Africa remains the most heavily affected region, accounting for 71% of all new HIV infections in 2008 /1/.

In Ethiopia, HIV/AIDS is a major public health problem. HIV was first detected in Ethiopia in 1984 and the first two AIDS cases were reported in 1986 /1, 2/. According to calibrated single point estimates (2007), the national adult HIV prevalence is reported to be 2.1% (7.7% in urban and 0.9% in rural areas). Currently, 977,394 Ethiopians are living with HIV/AIDS (41% males, 59% females); in 2007 an estimated 75,420 pregnant women were HIV-positive. The highest prevalence occurs in the 15-24 age groups. The prevalence is higher among females than males in both urban and rural areas /3/. During childhood, girls, especially in developing countries including Ethiopia, are victims of child marriage, sexual abuse, and so-called female genital mutilation. Throughout their life they may be denied education, health care, and nutrition by their parents. They may be subject to emotional, physical, or sexual abuse by their partners, their relatives or non kin, as well as forced pregnancy, harassment, trafficking, and rape /4/.

The risk that a woman will die as a direct result of complications arising from pregnancy and delivery is higher in developing countries of the world than the developed ones /5, 6/. However, maternal deaths only represent a tip of the iceberg. For every woman who dies, approximately 30 or more incur injuries, infections, and disabilities that are usually untreated, unspoken of, and are often humiliating, painful, and debilitating. One of these disabilities is obstetric fistula /7/.

Fistula is an abnormal communication between two epithelial surfaces or cavities.

An obstetric fistula that is an opening in the wall of the vagina connecting to the bladder is called Vesico Vaginal fistula and to the rectum, Recto Vaginal fistula. Mostly it is the result of prolonged obstructed labor, creating one or more holes that leak urine and/or feces uncontrollably /8-11/.

Despite its devastating impact on the lives of girls and women, obstetric fistula is still largely neglected in the developing world. It has remained a 'hidden' condition, because it affects some of the most marginalized members of the population—poor, young, often illiterate girls and women in remote regions of the world /12/.

WHO estimated that over 2 million women are currently living with untreated Obstetric fistula with an addition of 50 000 – 100 000 new cases each year, mostly in Africa and Asia. In Sub Saharan Africa alone, the minimum incidence of obstetric fistula in rural areas is estimated to be 33,450 cases per year - many more than has been estimated based on hospital reports. The actual prevalence of obstetric fistula is not known primarily because many women with fistulas do not seek treatment. In Ethiopia the incidence of obstetric fistula is estimated to be nearly 9,000 /13, 14/.

The most common cause of obstetric fistula in developing countries is prolonged obstructed labor, which occurs in around 4.6% of pregnancies and causes around 8% of maternal mortality worldwide. Several social, cultural and health system factors contribute to the occurrence, such as lack of emergency obstetric care, child marriage associated with early pregnancy, FGM, gender discrimination, poverty, malnutrition and poor health services /15 – 17/.

In almost all cases of obstetric fistula the leaking of urine and the offensive smell make the women who suffer from the condition highly stigmatized and ashamed of themselves. They also tend to suffer from a loss of place, divorce, separation from family, loss of self-esteem, economic deprivation, worsening poverty and malnutrition. They are also considered 'cursed,' which prevents them from seeking help and treatment /18-20/.

The ultimate goals of fistula surgery are to restore normal function of the lower urinary tract and any other pelvic structures affected. This process is more challenging than simply closing the fistula, which has been done with a high degree of success in 80–95% of cases in most series. The best chance of fistula closure is generally agreed to be at the time of the first operation./21/

Breakdown of repair is a major disappointment. It may be because of the operation was not done well, because of postoperative care (catheter blockage) or occasionally because of postoperative infection. The usual reason for failure is that the damage was so severe as to preclude an adequate repair. Identifiable risk factors for breakdown are previous operation, severe scarring, and destruction of the urethra, a small bladder, uretric orfices outside the bladder and concurrent recto- vaginal fistula./22/

Hence analysis to determining the magnitude of HIV infection and assessing the effect of HIV and other factors on outcomes of fistula repair among fistula patients was conducted in Bahirdar Hamlin Fistula center. In order to plan intervention measures it is important to undergo serologic surveys and studies on the effect of HIV and other factors on outcomes of fistula repair among obstetric fistula patients.

Literature Review

1.1 Obstetric fistula

Obstetric fistula is a severe injury that can develop during prolonged and obstructed labor. Without prompt action, usually a caesarean section, the constant pressure of the skull in the birth canal cuts off the blood supply to the tissue causing the tissue to disintegrate. This results into an abnormal opening between the vagina and the bladder or rectum and/or both. The girl or woman is left with continuous and uncontrollable leaking from her vaginal, result in constant and embarrassing odor and wetness./23/

According to Family Care International, 14 million babies are born to girls under 19 years every year, accounting for 10 % of all births. In developing countries, one in every six births is to girls aged 15-19 and 33 % of women give birth before the age of 20 (ranging from a low of 8 % in East Asia to 55 % in West Africa). In Niger for example, 88% of women with obstetric fistula are aged between10-15 at marriage. In India, the mean age at marriage is less than 18 years. Over 70 % of women in India are married before 20; 54 % before 18; and 26 % before 15. /24/

Although obstructed labor and obstetric fistulas can occur at any age during the childbearing years, adolescent women are at particular risk, especially where early marriage is common. In parts of SSA, for example, many women become pregnant soon after menarche occurs. A study in Nigeria on 241 fistula patients shows that more than one quarter of those studied had become pregnant before age 15; while more than one half had become pregnant before age18 /25/.

A study on commonalities among women who experienced Vesico Vaginal Fistulae as a result of obstetric trauma in Niger from September 2005 to January 2006 shows: the mean patient age at the time of surgery was 26.14 years (range 16-44 years). Only 15.5% of the participants had ever attended school; the longest term of attendance was 3 years. None of the women could read or write. The average age at marriage and at first pregnancy was 15.6 years (range 10-22 years) and 17.3

years (range 11-25 years), respectively. Among the cohort, 44.9% were primiparous, and 22.4%, 13.8%, 63.8% of the women were delivered by cesarean section, with forceps assistance, and by spontaneous vaginal delivery, respectively. In the cohort, 48.3% had no living children. The outcome of the labor that caused the fistula was especially poor; 91.4% of these women gave birth to stillborn infants. By 2 days after the delivery, 96.6% of the babies were dead /26/. A study carried out at AAFH in 2006, an autopsy of women who had died of obstructed labor, raised the following question: How can childbirth, a rather normal physiological situation, create this serious problem in developing countries? The study shows that in 66% of all cases, the fistulae were caused by cephalopelvic disproportion, while in 33% it was due to malpresentation. The major reasons were lack of access to emergency obstetric care, distance to find emergency obstetric care, financial constraints to access health facilities, malnutrition, early marriage, poverty and illiteracy. A recent survey from this hospital showed that the three most important reasons for not reaching a health institution during labor are distance, economical factors and poor knowledge in 28.2%, 13.6% and 9.8% of the cases, respectively. In Ethiopia, childbirth is the leading cause of obstetric fistula, which accounts for 95.4% of all cases /27/.

Even though detailed community-based research is lacking, structured interviews of 639 fistula patients treated at the AAFH between May 1999 and February 2000, revealed that the mean age of fistula patients at presentation to the hospital and at first marriage was 22 and 14.7years respectively. The mean age at the causative delivery was 17.8.More than 83% had their causative delivery when they were under 20 years old, 64% were primiparous, and the average length of labor was 3.8 days (range 1–10 days). More than 93% of the deliveries to women with fistula were stillborn, and more than 50% of fistula patients were divorced.

While most fistula cases in developing countries stem from obstetric causes, others result from direct tearing caused by rape or vaginal trauma. For example, at the Addis Ababa Fistula Hospital, which treats about 1,200 fistula cases per year, a study found that over a six-year period, 91 fistula cases were caused by rape or sexual abuse within a marriage/28/. It is difficult to estimate the prevalence of

fistula caused by sexual abuse, however, because many victims do not seek treatment, often fearing stigmatization or lacking access to health care/29/. In wartime conditions, sexual violence is common, often used as tactic to intimidate and control. Aid workers in war-torn areas have estimated that one woman in every three is a rape victim and that the majority of new fistula cases are caused by rape /30/.

The treatment of obstetric fistula depends on when the patient presents for care after obstructed labor. If a woman presents within the first 3 months after injury, prompt initiation of continuous bladder drainage with an indwelling catheter can allow spontaneous closure of the fistula, particularly if it is small (<2 cm in diameter)./31,32/Because fistulas from prolonged obstructed labor occur as the result of a broad field injury with an area of central necrosis surrounded by living but still severely damaged tissues, the traditional teaching has been that 3 months should elapse before any attempt at surgical closure is made so that the full extent of the injury is manifest. / 33/

Success rates after fistula repair vary from 85% to 92%, and the best chance for success is with the first operation. In a large series of 2484 patients, Hilton and Ward reported successful fistula closure in 83% of patients at the first attempt, whereas successful closure was achieved in only 65% of patients who needed two or more operations./13,34/

2. HIV/AIDS

During adolescence, women are exposed to a new set of health risks. Lack of knowledge about their bodily health and appropriate health care services put adolescent women at risk of unwanted pregnancy, early childbearing and unsafe abortion as well as sexually transmitted infections including HIV/AIDS. Denial of formal education and employment to girls makes them vulnerable and unable to make decisions regarding their own sexuality and reproduction to delay marriage and pregnancy, and refuse unwanted sex/4/.In sub-Saharan Africa, girls ages 15–19 years are 2–8 times more likely than boys of the same age to become infected with HIV. The risk of acquiring HIV from a single act of unprotected vaginal intercourse is 2–3 times greater for women than men. Globally, the prevalence of

HIV infections among women is highest from ages 15 to 24; the risk for men peaks 5–10 years later.

Marriage by age 20 has become a risk factor for HIV infection for young and adolescent girls, as has been shown by several studies of African populations. A study in Ethiopia, the overall unadjusted HIV prevalence among pregnant women attending ANC clinics was 3.8%(urban 6.2%, rural 2.5%) in 2007.

Women in the age group of 25-34 years and in both urban and rural area had the highest prevalence rates of 4.1%(urban7.3%,rural 2.7%).(39)A study in Kenya demonstrated that married girls had a 50% higher likelihood than unmarried girls of becoming infected with HIV. This risk was even higher (59%) in Zambia. In Uganda, the HIV prevalence rate for girls 15–19 years of age was higher for married (89%) than single girls (66%); for those 15–29 years of age, HIV prevalence was 28% for married and 15% for single girls. This study noted that the age difference between the men and their wives was a significant HIV risk factor for the wives. All of these studies showed that girls were being infected by their husbands. A hypothesis relevant to this finding is that a young girl may be physiologically more prone to HIV infection because her vagina is not yet well lined with protective cells and her cervix may be more easily eroded. Risk for HIV transmission is also heightened because hymnal, vaginal, or cervical lacerations increase the transmission rate, and many of these young girls lose their virginity to HIV-infected husbands/31/

Although Women with fistula may be sexually active; HIV counseling is often not included in fistula treatment. Many providers suggested that HIV counseling would simply add to the “psychological burden” of the patients. However, some facilities, such as the Evangel Hospital in northern Nigeria, do offer voluntary HIV testing and counseling to fistula patients/32/

To date no study was conducted anywhere in the world to assess HIV prevalence among fistula patients and effect of HIV and other factors on outcomes of fistula repair. Therefore this study will be a breakthrough and will be used as a baseline data to continuously explore HIV prevalence and effect of HIV on outcomes of

fistula repair to design treatment strategy plan at regional, national and possibly at international level.

Objectives

General objective:

To assess HIV prevalence among fistula patients and factors affecting outcome of fistula repair at Bahirdar Hamlin Fistula Center, Amhara National Regional State, and Northwest Ethiopia.

Specific objectives:

- To determine the prevalence of HIV among fistula patients at Bahirdar Hamlin Fistula Center
- To assess factors affecting outcome of fistula repair

Methodology

Study design:

Institution based cross sectional study was conducted to assess HIV prevalence among fistula patients and factors affecting outcome of fistula repair at Bahirdar Hamlin Fistula Center, Amhara National Regional State, and Northwest Ethiopia.

Study area:

The study was conducted in Amhara region, at Bahirdar town. The region has 11 zones, 165 woredas with a total population of around 20 million. Bahiradar, which is the capital of ANRS, is located 565km away from Addis Ababa Northwest Ethiopia

The study was conducted at Bahirdar Hamlin fistula center, in the capital city of ANRS. It is one of the fistula centers in the country and is the only fistula center in the region expanded by AAFH. Bahirdar Hamlin Fistula Center has 45 beds.

From its establishment 2004 up to 2010, about 2900 Fistula patients have been treated. The center is Humanitarian, Nongovernmental, non profitable organization aimed to provide free services to fistula patients who came from every corner of the Amhara region as well as for the neighboring region due to referral. The Center also serves as a waiting area for high risk mothers /previously treated fistula patients/ and rehabilitation services are also been delivered in addition to the surgical & medical treatments.

Study period:

The study was conducted from June, 15 /2010 to October, 15/ 2010

Source population

The source population of the study was women who have developed fistula in Amhara regional state and in neighboring regions.

Study population

All women who developed fistula & admitted to the center from June 2010 to October 2010 were the study population.

Inclusion and Exclusion Criteria

Inclusion Criteria:-

- New fistula patients admitted to Bahirdar Hamlin Fistula Center

Exclusion Criteria:

- Unwilling to be tested for HIV
- Urerteric fistula and untreatable/ no bladder/ fistula patients

Sample size and Sampling procedure

All study subjects who were willing to participate in the study from June 15/2010 to October 15 /2010.

Variables of the study:

Dependent variables:

- Surgical repair outcome /closed, not closed/

Independent variables:

- **Socio-demographic variables** such as**,** age, height**,** Weight, educational status, religion**,** marital status, Parity, days traveled to the nearest health institution, occupation, partner occupation, no. of sexual partners, current HIV status , BMI
- **Obstetric related variables** such as, place of delivery, mode of delivery, duration of labor, extent of injury (VVF & RVF length &width in cm)

Operational Definition

Obstetric Fistula: the breakdown of tissue in the vaginal wall communicating into the bladder (VVF) and/or to the rectum (RVF).

Fistula Closed: after surgical repair if the dye test was negative.

Fistula not closed: after surgical repair if the dye test was positive.

Data Collection Procedure

Data were collected from June15/2010 to October 15 /2010 by interviewing patients using structured and pre tested questionnaires and patients document review.

On admission patients were informed of the ongoing study, enroll, interview and examine by an attending doctor. The counseling service was provided by trained nurse counselor. After pretest counseling the nurse counselor draw blood from consented patients and coded the sample and sent to laboratory for testing by the trained laboratory technologist. Rapid tests KHB as screening and Stat Pack and Unigold as confirmatory tests were used.

Pre-operatively, all women were assessed and fistulae classified using a previously described classification, using fixed reference points (37) (Table1). All women underwent vaginal fistula repair. An indwelling urethral catheter was inserted for a period of 10–21 days, depending on the site of the fistula and operative findings such as significant scarring.

The women remained in hospital for the duration of the catheterization and at least 2 days following removal of catheter. Prior to discharge, the women were assessed in the outpatients by an experienced member of the nursing staff.

The nurse counselor also interviewed and record relevant patients' information using structured and pretested questionnaires. The variables of interest were coded and entered to the computer soft ware. Data entry temple was developed using EPI Info windows version 3.5.1. One data clerk was trained on data entry and the investigator with the data clerk directly entered the data from the questionnaires to the computer software.

Data quality

Pre testing of the questionnaires was done by randomly selecting 5 to 7 patients' before the actual survey with in the center itself as it is the only fistula center in the region. During data entry data clerk was selected and trained on data entry. Completeness of information was checked before data entry and data entry was done by two individuals, one enter the data in to the computer and the other read the information from questionnaires and they counter-checked that complete and accurate information are entered. After data entry the investigator with other persons has checked the data entered to the computer software. Finally data were cleared before the analysis and bivarate and multivariate regression model were used in data analysis.

Data processing and Analysis

Data were coded, entered and cleaned using Epi info window version 3.3.1 statistical package and SPSS software. The prevalence of HIV was determined and the socio demographic characteristics of patients were described. Data entry was made by the principal investigator. Statistical analysis was performed using SPSS version 15 windows statistical program. Differences between Proportions were assessed using chi-squared test with 95% confidence interval and multiple regression analysis to determine the effect of the factors on the outcome of interest and to control confounding variables. Finally data is presented in tables and in text. P value ≤0.05 was considered statistically significant.

Ethical consideration

Ethical approval was obtained from the ethical committee of the Addis continental Institute of Public Health, University of Gonder and from the Addis Abeba Fistula Hospital. Written consent was obtained from all study subjects. Pre-test counseling was done for those agreeing to HIV testing, followed by post-test counseling for those opting to receive their results. There was a benefit for those fistula patients who were involved in this research for those who were positive we were referred to the Felege Hiote Hospital for farther counseling, investigation and for starting of ART and for those who are negative we were given appropriate counseling to continue safe sex practice .In addition the results of the study were no doubt to be important for quality improvement in the prevention & treatment of obstetric fistula. The interview was conducted in separate place. Confidentiality was maintained throughout the process.

The Information collected from this study was stored in a file, which was not having name on it, but a code number assigned to it. Which number belongs to which patient was be coded and locked with key and it was not be revealed to anyone except the principal investigator.

Results

Socio-Demographic characteristics of study subjects

There were 206 women with fistula admitted to the hospital over the study period, from these 205 had Socio-demographic, obstetric records and surgical records available.

The age of the study subjects ranged from 16 to 79 years (median 25.5). The majority 78 and 83(37.9% and 40.3%) were in the age range of 16- 24 and 25- 34 years respectively.

Most of the patients were Orthodox Christians192 (93.3%), lives with their husbands 141(68.4%) and were unable to read and write 187(90.8%).

Nineteen eight (47.6%) were farmers by occupation, followed by housewives 91(44.2%), students 6(2.9%) and Merchants 6 (2.9%). (Table 2)

Obstetric related characteristics of the study subjects

Amongst of 206 fistula patients 103 (52%) were stayed at home in labor from 1 to 3 days and 83 (41.9 %) of them were stayed at home for more than 3 days.42 (20.4%) of fistula patients were married by the age of less than 10 years and 97 (47.1 %) of them married at first time by the age of 11 to 14 years. Those patients who developed fistula at the age of 18 and above were 172(83.5%). About 103(50%) were multiparous, 133(67.5%) delivered at health institutions. Reason for developing of fistula, the majority198 (96.1%) was due to childbirth; of all patients 121(58.7%) were < 18.5 BMI and 120(58.3%) had only one sexual partner.

The Obstetric characteristics of the fistula patients admitted for surgical repair are also summarized in Table 2.

Table 1: Socio- Demographic Characteristics of Fistula Patients, / n=206/Bahirdar Hamlin Fistula Center, November 2010

Socio-demographic characteristics	Number	%
Age		
15-24	78	37.9
25-34	83	40.3
35-44	24	11.7
>45	21	10.2
Marital status		
Married	141	68.4
Divorced	55	26.7
Widowed	6	2.9
Single	2	1
Separated	2	1
Religion		
Orthodox	192	93.2
Muslim	14	6.8
Educational status		
Unable to read and write	187	90.8
Able to read and write	1	.5
Elementary school	8	3.9
Secondary and more	10	4.9
Occupation		
Housewives	99	48.1
Farmer	91	44.2
Merchant	6	2.9
Commercial sex worker	6	2.9
Student	2	1.0
Government employee	2	1.0

Table 2: Obstetric Characteristics of Fistula Patients, Bahirdar Hamlin Fistula Center, November 2010

From 206 fistula patients, 198 of them the cause of the fistula was due to child birth whereas 8 of them due to post coital injury. (No obstetric data for 8 of the fistula patients)

Obstetric characteristics	**Number**	**%**
Parity/n= 206/		
Multiparous	103	50.0
Primiparous	98	47.6
Nulipara	5	2.4
Age at development fistula/n=206/		
≥ 18 years	172	83.5
≤17 years	34	16.5
Mode of delivery/n=198/		
Spontaneous vaginal delivery	107	54.0
Caesarean section	46	22.8
Assisted vaginal delivery	45	23.2
Outcome of delivery/n=198/		
Stillbirth	175	88.4
Early neonatal death	18	9.1
Live birth	5	2.5
Duration of labor/n=198/		
1-3 days	103	52.0
Over 3 days	83	41.9
Less than 1 day	12	6.1

Only five fistula patients were found to be infected with HIV putting its seroprevalence 2.4 %. All fistula patients with HIV 5(100%) were age between 25-35 years old, 4(80%) were divorced, 2(40%), 1(20%) and 1(20%) had two, three and more than four sexual partners, respectively. About 4(80%) the cause of the fistula was related with childbirth, 1(20%) was due to post coital injury, 4(80%) of the age of the patients during the developing of fistula were < 17 years and 5(100%) of them were Christians. From 4(80%) of them > 18.5 BMI, 3(60%) were illiterate and 2(40%) were multiparous.

Of all VVF patients with HIV, 1(33.3%) of the widths of the fistula was < 1.5 c.m, 1(33.3%) was between 1.6 to 3 c.m and 1 (33.3%) was > 3.1 c.m. About 1(33.3%) of the sizes of the fistula was > 3.5 c.m, 1(33.3%) was between 1.5 to 2.4 c.m, 1(33.3%) was < 1.4 c.m far from the urethral meats.

All RVF cases with HIV, 3(100%) of the widths of the fistula were < 1.5 c.m. About 2(66.7%) of the size of the fistula were between 1.5 to 2.4 c.m and 1(33, 3%) was between 2.5 to 3.4 c.m far from the anal sphincter.

Of all fistula patients with HIV, 4(80%) had Cd 4 count were > 500 cell/mm3 and on ART. From all VVF patients with HIV operations, 2(66.7 %) were successful (closed) and 1 (33.3 %) was failed (not closed). From 3 RVF cases with HIV, 1(50 %) was successful (closed) and 1(50%) was failed (not closed) but one of the patient was not operated because her Cd 4 count was < 200 cell/mm3.

The operative diagnosis of all 205 operations were 180(87.8%) VVF repairs, 17(8.3%) RVF repairs and 8 (3.9%) Visicovaginal Fistula and Rectovaginal Fistula repair were carried out under spinal anesthesia.

Of all the VVF, 101(53.7%) of the widths of the fistula were < 1.5 c.m, 42(22.3%) were between 1.6 to 3 c.m and 45 (21.8%) were > 3.1 c.m. About 59(31.4%) of the sizes of the fistula were > 3.5 c.m, 53(28.2%) were between 2.5 to 3.4 c.m, 35(18.6%) were between 1.5 to 2.4 c.m and 41 (21.8%) were < 1.4 c.m far from the urethral meats.

From all RVF cases, 11(42.3%) of the widths of the fistula were < 1.5 c.m, 5 (19.2%) were between 1.6 to 3 c.m and 10(38.5%) were >3.1 c.m. About 2(7.7%) of the size of the fistula were >3.5 c.m, 9 (34.6 %) were between 2.5 to 3.4 c.m, 9 (34.6 %) were between 1.5 to 2.4 c.m, 6(23.1%) were <1.4 c.m far from the anal sphincter.

Vaginal repairs were performed primarily in 205 patients.

Of all VVF operations, 170 (90.4 %) were successful (closed) and 18 (9.6 %) were failed (not closed). From 25 RVF cases, 22(88 %) were successful (closed) and 3(12%) were failed (not closed).

According the bivariate regression shown; those urinary fistula patients age from 25-34 years old had association with failed urinary fistula operation. And the multivariate regression shows also age from 25-34 /the reference age was from 15-24/of urinary fistula patients had a significant association at [AOR (4.48(1.15, 17.46)] with failed urinary fistula operation.

Table-4 depicts the result from logistic regression age had significant association with the outcome of urinary surgical repair in the bivariate and multivariate analysis (p- value < 0.05). Whereas VVF size, VVF width, BMI and HIV status had no association with the outcome of urinary surgical repair.

Table 3: HIV Serostatus by diagnosis among hospitalized fistula patients

Diagnosis	Total (No.)	No of positive	% positive
VVF	180	2	1.11%
RVF	18	2	11.11%
VVF & RVF	8	1	12.5
Total	206	5	2.4%

n = 206 fistula diagnosis

Table 4: Obstetric determinants of urinary surgical outcome among VVF patients in Bahirdar Hamlin Fistula Center, November, 2010

Variables	Urinary surgical outcome		OR (95 % CI)	
	Success	Failed	Crude	Adjusted
Age				
15-24®	68	3	1:00	1:00
25-34	62	12	4.39(1.18,16.28)**	4.48(1.15,17.46)
35-44	21	2	2.16(0.34,13.79)	2.57(0.35,18.69)
>45	19	1	1.19(0.12,12.14)	1.11,(0.11,11.86)
Size of VVF				
> 3.5 c.m®	55	4	1:00	1:00
2.5-3.4 c.m	49	4	1.12(0.27,4.73)	1.25(0.25,5.64)
1.5-2.4 c.m	32	3	1.29(0.27, 6.13)	1.37(0.26,7.31)
< 1.4 c.m	34	7	2.83(0.77,10.39)	3.18(0.75,13.42)
Width of VVF				
< 1.5 c.m®	94	7	1:00	1:00
1.6 - 3 cm	38	4	1.41(0.39,5.11)	1.21(0.31,4.75)
> 3.1 c.m	38	7	2.47(0.81,7.53)	1.64(0.49,5.47)
HIV status				
Negative®	168	17	1:00	1:00
Positive	2	1	2.94(0.43,57.36)	2.78(0.21,37.59)
BMI				
< 18.5	103	11	1.02(0.38,2.77)	0.89(0.29,2.65
> 18.5®	67	7	1:00	1:00

** = statistically significant at p < 0.05

® = Reference category

Table 5: Cross-tabulation of outcome of surgery by repair attempt

Outcome of surgery by repair attempt

	Cured		Failed	
	Count	Row (%)	Count	Row (%)
VVF	170	90.4	18	9.6
RVF	22	88	3	12
Total	**192**	**90.1**	**21**	**9.9**

n= 213 Operations

Discussion

This study has attempted to assess the prevalence of HIV and factors affecting the outcome of repair among fistula patients in the study area. Although several studies on the socio demography and surgical outcome have been conducted in different part of the world, except this study no single study had examined HIV seroprevalence and factors affecting with outcome of repair in fistula patients.

The 2.4% seroprevalence of HIV observed among fistula patients in the present study was relatively the same as the national adult HIV prevalence rate (2.1%) according to calibrated single point estimate in 2007. (3)Our result has shown that the age of all fistula patients who have had HIV ranges from 25- 35 years, this is in line with a study in Ethiopia, the overall unadjusted HIV prevalence among pregnant women attending ANC clinics was 3.8%(urban 6.2%, rural 2.5%) in 2007. Women in the age group of 25-34 years and in both urban and rural area had the highest prevalence rates of 4.1%(urban7.3%,rural 2.7%).(39) Another studies in Tanzania show peak prevalence of HIV infection in the age group of 25- 34 years or younger.(40)

This study revealed that among fistula patients with HIV 2(40%) were primiparous, 3(60%) of the women delivered by spontaneous vaginal delivery. Similar study in Niger from September 2005 to January 2006 shows among the cohort, 44.9% were primiparous and 63.8% of the women delivered by spontaneous vaginal delivery. (26).

This study shown that from all patients underwent a primary repair of their VVF, 90.4 %(170) and from 25 RVF cases, 88 %(22) were successful (closed). All of these surgical procedures were approached vaginally.

This is in line with the research finding the fistula can be closed in up to 94% of cases with their first operation (3). If a fistula is not closed successfully, repeat operations prove difficult. With the second operation, the success rate drops to 79% and to 53% with the third. A similar trend was found by Hilton and Ward (35).

Successful closure, however, does not necessarily equate to a functional cure. The recto-vaginal fistula seems to have a lower initial success rate at 73% (10). However, with subsequent operations it is almost always possible to get a successful closure although the patient may have some remaining anal flatal and/or stool incontinence from a poorly functioning sphincter (34).

The finding of our study also showed significant association between urinary fistula patients age and fistula outcome. Urinary fistula patients age from 25-34 years old were 12 (66.7%) more likely to be failed than others, like age from 15-24 years were 3(16.7%).

The result of this study indicated that the site, size of the fistula and HIV status of the patient did not differ significantly in terms of successful closure ($p>0.05$). Similar study was done in Addis Abeba Fistula Hospital the types of fistula(types 1-4) and size of the fistula did not differ significantly in terms of successful closure(chi squared $p>0.7$).(38)

Strength of the study

This study will be a breakthrough and will be used as a baseline data to continuously explore HIV prevalence among fistula patients.

Limitation of the study

The numbers of patients involved in the study were not adequate. This is due to seasonal influence and short study period.

Conclusion

- The prevalence of HIV infection was 2.4% among fistula patients and most of the patients were come from the rural area. This finding was in line with the national figure, the overall HIV prevalence among pregnant women attending ANC 3.8 %(2.5% in rural).
- The risk of unsuccessful closure is significantly related with age. This is related with the cause of fistula(most of them were caused by obstructed labor, it was frequent in younger age

Recommendation

- Continuing this study in long period and in other fistula centers of the country
- To improve the quality of treatment of fistula HIV testing and counseling would be included in the management of fistula.

Fistula closure rate in the Bahirdar fistula center is encouraging but further intervention should be undertaken to increase fistula success rate.

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Annex

Annex 1: Data collection format and coding

Socio- demographic characteristics

1- Patient registration Number. ----------

2- Date of admission. ----------

S.No.	Questions	Response Categories	Remark
101	Age of the patient in years	Age._____	
102	Patient weight……	K.g……	
103	Patient height	C.m	
104	BMI?/field after calculating age/height2	< 18……..1 18- 25……2 >25……..3	
105	What was the age difference b/n you and your first partner during marriage? 1. 2. 3.	1-3 years……1 4-6 years……2 > 6 years……3	
106	What was your age in years at the time of marriage? 0.	≤10years……1 11- 14 years……2 15- 19 years……3 20- 24 years……4 25 – 29 years……5 30- 34 years……6 ≤35years……7	

107	What is your occupation?	4. Housewife……1 5. Agriculture……2 6. Government employee…3 7. Merchant……4 8. Prostitute……5 9. Student……6 10. Other specified…..7 11.	
108	What was your last/current partner's occupation?	12. Agriculture…….1 13. Merchant……..2 14. Government employee…3 15. Driver……4 16. Soldier…….5 17. Other specified……..6	
109	What is your religion?	1. 2. Christian……..1 3. Muslim……..2 4. Other specify.----……..3	
110	What is your educational status?	1. can't read & write…….1 2. Elementary……2 Secondary……3 3. Higher education…….4	
111	What is your marital status?	Not married ……1 Married ……2 Separated……3 Divorced……4 Widowed……5	
112	What is your Parity?	Nullipara……1 Primipara……2 18. Multipara……3 Grandmultipara ……4	

113	How may sexual partners have you had?	4. 1……1 5. 2……2 6. 3……3 7. >3……4	
114	Did you check your sexual partner's serostatus before marriage?	19. Yes……1 8. No……2	
115	If the answer for question 107 is yes, what was the result?	20. Positive……1 21. Negative……2	
116	Did you check your serostatus before marriage?	22. Yes……1 23. No……2	
117	If the answer for question 109 is yes, what was the result?	24. Positive……1 25. Negative……2	
118	During the last 3 months did you practice any sexual intercourse?	5. Yes……1 6. No……2	
119	Did you check your serostatus before 3 months?	Yes……1 No……2	
120	If the answer for question 112 yes, what was the result?	26. Positive……1 27. Negative……2	
121	If her serostatus was positive, what was the staging of HIV by now??/field by asking the examining doctor	28. Stage I……1 29. Stage II……2 30. Stage III……3 31. Stage IV……4 32. Stage V……5	
122	If her serostatus was positive for HIV, what was her resent CD4 count in the last 3 months??/field by asking the examining doctor	33. < 200……1 34. 200 to 500……2 35. > 500 ……3	
123	If her serostatus was positive for HIV, was she under ART?	36. Yes……1 37. No……2	
124	What was your age in years at the time of developing obstetric fistula?	38. < 17years……1 39. > 18 years……2	

125	Accompanying person	Self……1 Husband……2 Relatives……3 Father……4 Organization……5 Other specify……6	
126	Estimated distance to the nearest health institution traveled on foot in days?	< ½ day……1 1/2- 1 day……2 2- 3 days……3 > 4 days……4	
127	Estimated distance to the nearest health institution/able to provide EMOC/ traveled by transport (days)?	< ½ day……1 1/2- 1 day……2 2- 3 days……3 > 4 days……4	
128	What was the possible reason for the development of Fistula?	Child birth……1 Surgery……2 Trauma……3 Post coital……4 Other specify ……5	
129	Did you utilize ANC service?	Yes……1 No……2	

130	Where was the Place of delivery at the time of developing obstetric fistula?	Home ……1 Health institution…… 2 Other specify……3	
131	What was the mode of delivery at the time of developing obstetric fistula?	S v D……1 Assisted vaginal delivery….. 2 Caesarian section …… 3 others specify……4	
132	How many day(s) was the duration of labor at home?	< 1 day……1 2-3 days……2 >4 days……3	
133	How many day(s) was the duration of labor at health institution?	< 1 day……1 2-3 days……2 >4days……3	
134	What was the fetal out come at the time of developing OF?	Alive……1 still birth ……2 neonatal death……3 Other specify……4	
135	What type of circumcision was done to the patient?/field by asking the examining doctor/ . 1.	Un circumcised……1 Type I……2 Type II…… 3 Type III ……4	
136	What was the length in cm respectively/ field by asking the examining doctor/ 1. 2.	Length. ------ ----------	
137	What was the width of VVF in cm respectively/ field by asking the examining doctor/ 3.	Width. ----------	
138	What was the length RVF in cm respectively / field by asking the examining doctor/ 4. 0.	Length. ----------	
139	What was the width of RVF in cm respectively / field by asking the 5.	Width. ----------	

	examining doctor		
140	Are there any sign and symptoms of infection in the surgical repair site after repair?	6. Yes……1 7. No……2	
141	If the answer for question 140 is yes, what was the outcome?	8. Recover……1 9. Not recover……2 10.	
142	What was the duration of incontinence in months?	3 to 11 months……1 12 to 24 months……2 24 to 120 months……3 >121 months……4	
143	Total length of stay in the center (in week) /field by asking the examining doctor/	0. <3……1 1. 4 – 5……2 2. 6 – 12……3 3. >13……4	
144	What type of fistula repairing procedure was done to her? /field by asking the examining doctor/	Urinary fistula ……1 Rectal fistula……2 Both urinary & rectal……3 3rd degree tears……4 Urinary &3rd degree tears …..5	
145	What was the Urinary surgical repair outcome of the patient? /field by asking the examining doctor/	Cured……1 Failed……2	
146	What was the Bowel surgical repair outcome of the patient? /field by asking the examining doctor/	Cured……1 Failed……2	

Thank you!!

Name & Signature of data collector._____

Date of data collection. ----------

Name & signature of researcher/supervisor._____

የበሽተኛዋ አጠቃላይ መረጃ መጠይቅ

1- የበሽተኛዋ ካርድ ቁጥር. ----------

2- በሽተኛዋ የተኛችበት ቀን. ----------

ተ.ቁ	ጥያቄ	ምላሽ	መግለጫ
101	እድሜዎ ምን ያህል ነዉ?	_____ዓመት	
102	የበሽተኛዋ ክብደት	……..ኪ.ግ	
103	የበሽተኛዋ ቁመት	……..ሴ.ሜ	
104	ቢምአይ/አጠቃላይ የሰዉነት ሁኔታ/ሁኔታ?/በሽተኛዋን የመረመረዉን ሃኪም በማነጋገር የሚሞላ/	‹18……..1 18- 25…..2 ›25……..3	
105	የጋብቻ ሁኔታዎ ምንድን ነዉ ?	ያላገባች……..1 ባለትዳር……..2 ተለያይተዉ የሚኖሩ…3 የፊታች…… 4 የሞተባት……..5	
106	ከዚህ በፊት ስንት የትዳር ጎደኛ ነበረዎት?	አላገባሁም……1 አንድ……2 ሁለት……3 ሶስት……4 ከሶስት በላይ……5	
107	ከጋብቻ በፊት የኤች አይቪ/ኤድስ የደም ምርመራ እና ምክክር አገልግሎት አድርገዉ ያዉቃሉ?	አላዉቅም……1 አድርጌለሁ……2	
108	ጥያቄ 107 መልሱ አድረጌአለሁ ከሆነ ዉጤቱ ምን ነበር?	ቫይረሱ በደሜ ዉስጥ አልተገኘም…….1 ቫይረሱ በደሜ ዉስጥ ተገኝቶል……2	
109	ከጋብቻ በፊት የትዳር ጎደኛዎት የኤች አይቪ/ኤድስ የደም ምርመራ እና ምክክር አገልግሎት አድርገዉ ያዉቃሉ?	አላዉቅም……1 አድርጌለሁ……2	

110	ጥያቄ 109 መልሱ አድረጌአለሁ ከሆነ ዉጤቱ ምን ነበር?	ቫይረሱ በደሜ ዉስጥ አልተገኝም.....1 ቫይረሱ በደሜ ዉስጥ ተገኝቶል.....2	
111	ከ 3 ወር ወዲህ የጉበረ ስጋ ግኙኝነት አድርገዉ ያዉቃለሁ?	አዎ.....1 አላዉቅም.....2	
112	ከ 3 ወር በፊት የኤች አይቪ/ኤድስ የደም ምርመራ እና ምክክር አገልግሎት አድርገዉ ያዉቃሉ?	አድርጌአለሁ.....1 አላደረኩም.....2	
113	ጥያቄ 112 መልሱ አድረጌአለሁ ከሆነ ዉጤቱ ምን ነበር?	ቫይረሱ በደሜ ዉስጥ አልተገኝም.....1 ቫይረሱ በደሜ ዉስጥ ተገኝቶል.....2	
114	የኤችአይቪ ቫይረስ በደማቸዉ ዉስጥ ከተገኘ በአሁኑ ሰዓት የኤችአይቪ ደረጃዉ ስንት ነዉሁኔታ?/በሽተኛዋን የመረመረዉን ሃኪም በማነጋገር የሚሞላ/	ደረጃ .....1 ደረጃ .....2 ደረጃ .....3 ደረጃ .....4 ደረጃ.....5	
115	የኤችአይቪ ቫይረስ በደማቸዉ ዉስጥ ከተገኘ በአሁኑ ሰዓት ያለዉ ሲዲ 4 ስንት ነዉሁኔታ?/በሽተኛዋን የመረመረዉን ሃኪም በማነጋገር የሚሞላ/	ከ 200 በታች.....1 ከ 200 እስከ 500.....2 ከ 500 በታች.....3	
116	የኤችአይቪ ቫይረስ በደማቸዉ ዉስጥ ከተገኘ በአሁኑ ሰዓት የፀረ ኤችአይቪ መድሃኒት ጀምረዋል	አልጀመሩም.....1 ጀምረዋል.....2	
117	የትዳር አጋረዎ ስራ ምንድን ነዉ	ግብርና.....1 ንግድ.....2 የመንግስት ስራ.....3	

		ሹፌር……4 ወታደር……5 ሌላ ካለ ይገለጽ……6	
118	ስራዎትን ቢገልጹልኝ	የቤት እመቤት…..1 ግብርና……2 የመንግስት ስራ……3 ንግድ……..4 ሴተኛአዳሪ…….5 ተማሪ……6 ሌላ ካለ ይገለጽ……7	
119	በእርሰዎና በመጀመሪያ የትዳር ጎደኛዎ መካከል ያለዉ የእድሜ ልዩነትን ቢገልጹልኝ	1- 3 ዓመት……1 4-6 ዓመት……2 > 6 ዓመት…….3	
120	የትምህርት ደረጃዎ ምንድን ነዉ?	9. ማንበብና መጻፍ የማትችል…….1 10. አንደኛ ደረጃ ትምህርት…….2 ሁለተኛ ደረጃ ትምህርት……..3 11. ከፍተኛ ትምህርት ተቆም…….4	
121	ሐይማኖትዎ ምንድን ነዉ?	7. ክርስቲያን……1 8. ሙስሊም……2 9. ሌላ ካለ ይገለጽ.----……..3	
122	ለመጀመሪያ ጊዜ ትዳር ሲመሰርቱ ዕድሜዎ ስንት ነበር?	≤10 ዓመት……1 11- 14 ዓመት……2 10. 15- 19 ዓመት……3 11. 20- 24 ዓመት……4 12. 25- 29 ዓመት……5 13. 30- 34 ዓመት……6 14. ≤35ዓመት……7	
123	የሽንትእና/የአይምድር አለመቆጣጠር ችግር በደረሰበዎት ጊዜ እድሜዎት ስንት ነበር?	40. < 18 ዓመት……1 41. > 18 ዓመት……2	

124	የሽንትእና/የአይምድር አለመቆጣጠር ችግር በደረሰበዎት ጊዜ ስንተኛ እርግዝናዎት ነበረ?	አርግዞ አላዉቅም.....1 አንደኛ እርግዝና.....2 ሁለተኛ እርግዝና.....3 ሶስተኛ እርግዝና.....4 >3 በላይ እርግዝና.....5	
125	ወደዚህ የህክምና ማዕከል ማን ይዞዎት መጣ?	ብቻዩን.....1 ባለቤቱ.....2 ዘመዶቹ.....3 ባለቤቱና ዘመዶቹ.....4 በድርጅት.....5	
126	ቤተዎ ከቅርብ ከሚገኘዉ የጤና ድርጅት በአማካይ በእግር ስንት ሰዓት ይወስዳል ?	< ½ ቀን.....1 1/2- 1 ቀን.....2 2- 3 ቀናት.....3 > 3 ቀናት.....4	
127	ቤተዎ ከቅርብ ከሚገኘው የቀዶ ጥገና መስጠት ከሚችለዉ ሆስፒታል በመኪና ስንት ሰዓት ይወስዳል ?	< ½ ቀን.....1 1/2- 1 ቀን.....2 2- 3 ቀናት.....3 > 3 ቀናት.....4	
128	ለሽንትእና/ለአይምድር አለመቆጣጠር ችግር ምክንያቱ ምን ይመስለዎታል?	በወሊድ ምክንያት.....1 በቀዱ ጥገና ምክንያት.....2 በእደጋ.....3 በጉብረስጋ ግንኙነት.....4 ሌላ ካለ ይገለጽ.....5	
129	በእርግዝናዎት ጊዜ የቅድመ ወሊድ ምርመራ አድርገዎ ነበር?	አዎ.....1 አላደረኩም.....2	

130	ይህ የሽንትእና/የአይምድር አለመቆጣጠር ችግር በደርስበት ወቅት የወለዱት የት ነዉ?	ቤት.....1 ጤና ድርጅት.....2 ሌላ ካለ ይገለጽ.....3	
131	ይህ የሽንትእና/የአይምድር አለመቆጣጠር ችግር በደርሰበት ወቅት የወለዱት በምን መልኩ ነበረ?	በብልት.....1 በመሳሪያ በመታገዝ..... 2 በቀዶ ጥገና..... 3	
132	በቤተዎ ዉስጥ እያሉ ምጡ ምን ያክል ጊዜ ቆየበዎት?	< 1 ቀን.....1 1-3 ቀናት.....2 >3 ቀናት.....3	
133	በጤና ድርጅት ዉስጥ እያሉ ምጡ ምን ያክል ጊዜ ቆየበዎት?	< 1 ቀን.....1 1-3 ቀናት.....2 >3 ቀናት.....3	
134	የሽንትእና/የአይምድር አለመቆጣጠር ችግር በደረሰበዎት ጊዜ የልጁ ሁኔታ ምን ነበረ	በህይዎት አልነበረም.....1 ትንሽ ቆይቶ ሞተ.....2 በህይወት አለ.....3	
135	የግርዛት ሁኔታ?/በሽተኛዋን የመረመረዉን ሃኪም በማነጋገር የሚሞላ/ . 2.	ያልተገረዘች.....1 ደረጃ አንድ ግርዛት.....2 ደረጃ ሁለት ግርዛት..... 3 ደረጃ ሶስት ግርዛት.....4	
136	የሽንት ፊኛ ቀዳዳዉ ስፋትና እርዝመት በሴ.ሜ/በሽተኛዋን የመረመረዉን ሃኪም በማነጋገር የሚሞላ/ 11.	ስፋት በሴ.ሜ ------ ----------1 እርዝመትበሴ.ሜ ----------2	
137	የአይነምድር ከረጢት ቀዳዳዉ ስፋትናእርዝመት በሴ.ሜ /በሽተኛዋን የመረመረዉን ሃኪም በማነጋገር የሚሞላ 12. 1.	ስፋትበሴ.ሜ ---------- 1 እርዝመት በሴ.ሜ ----------2	
138	የቀዶጥገናዉ ከተሰራበት ቦታ ላይ የመመርቀዝ ምልክቶች ታይተዋል	አዎ.....1 አልታየም.....2	
139	ለ 138 ኛዉ ጥያቄ መልሱ አዎ ከሆነ ዉጤቱ ምን ነበረ	አገግማለች.....1 አላገገመችም.....2	

140	ይህ የሽንትእና/የአይምድር አለመቆጣጠር ችግር ከደረስ ምን ያክል ወራት ሆነዉ?	0. 1. 2. 3. 4.	‹ 3 ወር……1 ከ3—11 ወር……..2 ከ12—24 ወር……..3 ከ24—120 ወር……4 ከ 120 ወር በላይ….5	
141	በሽተኛዋ በህክምና ላይ በፊስቱላ ማዕከሉ የቆየችበት ጊዜ/በሳምንት/ /በሽተኛዋን የመረመረዉን ሃኪም በማነጋገር የሚሞላ	4. 5. 6.	<3……1 3 – 5……2 6 – 12……3 >12……4	
142	ለበሽተኛዋ የተደረገላት የቀዶ ጥገና አይነት/በሽተኛዋን የመረመረዉን ሃኪም በማነጋገር የሚሞላ	7.	የሽ ንት ፊኛ ቀዳዳ …1 የአይምድር ከረጢት ቀዳ……2 የሽንትፊኛእናየአይምድር ከረጢትቀዳ….3 የፊንጥጣ መተርተር……4 የሽንትጢትእናየፊንጥጣ መተርተር……..5 ሌላ ካለ ይገለጽ……6	
143	የሽንት ከረጢት ቀዳዳዉ ከቀዶጥገናዉ በኃላ?/በሽተኛዋን የመረመረዉን ሃኪም በማነጋገር የሚሞላ		ተዘግቶል……1 ፊርሶል……2	
144	የአይነምድርከረጢት ቀዳዳዉ ከቀዶጥገናዉ በኃላ? /በሽተኛዋን የመረመረዉን ሃኪም በማነጋገር የሚሞላ		ተዘግቶል……1 ፊርሶል……2	

አመሰግናለሁ!!

መረጃዉን የሰበሰበዉ ስምና ፊርማ_____

መረጃዉ የተሰበሰበበት ቀን ……

የጥናቱ ጠቆጣጣሪ ስምና ፊርማ……

unK መጠይቁ ለመካፈል የስምምነት ፊቃድ መጠየቂያ c'É

<u>የጥናቱ ርዕስ፡-</u> ኤችአይቪ ቫይረስ በፊስቱላ ጉዳት በተጠቁ ሴቶች ላይ ያለዉን ስርጭት እና የቀዶ ጥገና ከተደረገ በኃላ በዉጤቱ ላይ የሚያስከትለዉን ተፅኖ መኖሩን እና አለመኖሩንን ጥናት ለማከናወን ነው።

የጥናቱ አማካሪ ፕሮፌሰር፡- ይግዛዉ ከበደ የጥናቱ ተማራማሪ ተማሪ፡- ብርሃኑ መንበር

በአዲስኮንቲኔንታል ኢንስቲቲዉት የማህበረሰብ ጤና የድህረ ምረቃ ተማሪ ነኝ። አሁን እዚህ የመጣሁት ኤችአይቪ ቫይረስ በፊስቱላ ጉዳት በተጠቁ ሴቶች ላይ ያለዉን ስርጭት እና የቀዶ ጥገና ከተደረገ በኃላ በዉጤቱ ላይ የሚያስከትለዉን ጉዳት መኖሩን እና አለመኖሩንን ጥናት ለማከናወን ነው።

ዋናውን ውይይታችንን ከመጀመራችን በፊት እርስዎን ለምን በዚህ ጥናት እንዲካፈሉ እንደፈለግሁ እና የሚሰጡኝንም መረጃዎች ለምን እንደምፍልጋቸው ለማስረዳት እፈልጋለሁ። በውይይታችን ወቅት ያልገባዎት ጥያቄ ካለ ወዲያውኑ ያስቁሙኝ:: ስለጥናቱ በመጠኑ ካስረዳሁዎት በኃላ በውይይታቸንና በቃለ መጠየቁ ለመካፈል ወይም ላለመከፈል መወሰን ይችላሉ።

ይህንን ጥናት የማከናውነው በአዲስኮንቲኔንታል ኢንስቲቲዉት የማህበረሰብ ጤና የምማረው ትምህርት አንዱ መመዘኛዬ ስለሆነ ነው። በጥናቱ ወቅት በሆስፒታሉ ውስጥ ከሚገኙት ታካሚዎች፣ ነርሶች፣ የቀዶ ጥገና ሐኪሞች፣ እና የጤና ሙያተኞች ጋር ቃለ ምልልስ አደርጋለሁ። የማገኘውንም መረጃ በሁለተኛ ዲግሪ ለመመረቂያ የምርምር ጽሑፌ እጠቀምበታለሁ።ሠእንዲሁም በትምህርታዊ መድረኮች ለውይይት ላቀርበው እችል ይሆናል። ይህም በመላው አለም ለሚገኙ የፊስቱላ ችግር ተጠቂዎች ኤችአይቪ ያለዉን ስርጭት እንዲሁም ከቀዶ ጥገና በኃላ የሚያስከትለዉን ችግር በማወቅ አስፈላጊዉን የሆኑ አማራጮችን በመስጠት በህክምናዉ አሰጣጥ በኩል የራሱን አስተዋጾ ለማበርከት ነዉ።

እርስዎ በጥናቱ ለመሳተፍ ከ **25** እስከ **45** ደቂቃ ያህል ሊፈጅብዎት ይችላል። በጥናቱ የሚሳተፉት ፈቃደኛ ሲሆኑ ብቻ ነው። በዚህ ጥናት መሳተፍዎ በሆስፒታሉ ከሚደረግልዎ ሕክምናና ሌሎች ተዛማጅ ጥቅሞች ጋር ምንም አይነት ግንኙነት የላቸውም:: በርካታ ጥያቄዎች እጠይቅዎታለሁ የሚመልሱልኝም አርስዎ በገባዎት መንገድ ነው። ጥያቄዎቹ የሚያተኩሩት የፊስቱላ ጉዳቱከመድረሱ በፊት፤ ከደረሰበዎት ጊዜ ጀምሮ በጤናዎት ማለት በአካልም ሆነ በስነልቦና ስለደረሰበዎት ችግር፣ ስለትዳር ጎደኛዎት እንዲሁም ስለኤችአይቪ/ኤድስ ያለዎትን ግንዛቤ እና የኤችአይቪ/ኤድስ የደም ምርመራና የምክክር አገልግሎት በተመለከተ እጠይቅዎትለሁ። ከእርስዎ ጋር የማደርገውን ውይይት ለማንም አልገልጽም:: የምጽፋቸውንም ማስታወሻች ለማንም አላስነብብም። የተደረገውን ውይይት እኔ ብቻ ነኝ የማውቀው።

በውይይታችን ወቀት ለምጠይቅዎት ጥያቄ መመለስ ካልፈለጉ ላለመመለስ ሙሉ መብትዎ የተጠበቀ ነው። በውይይታቸን መካከል ቃለ መጠይቁን ለማቋረጥ ከፈለጉም ያለምንም ፍራቻና ይሉኝታ ማቋረጥ ይችላሉ። በፈለጉበት ወቅት ውይይታችንን አቋረጠንና አርፈን መቀጠል እንችላለን። ወይም ሙሉ በሙሉ ቃለ ምልልሱን ላለመቀጠል ይችላሉ።

ምንም አይነት ጥያቄ ካለዎት ለመጠየቅ ወደ ኃላ እንዳይሉ በመጨረሻም ፈቃደኛ ሲሆኑ የኤችአይቪ የደም ምርመራ ለማድረግ የደም ናሙና አወስዳለሁ።

ከዚህ በመቀጠል ውይይታችንን ከመጀመራችን በፊት እና ውይይታችንን ŸSS´Ñu? uò*ƒ* ጥያቄ እጠይቅዎታለሁ፡

1. በዚህ ጥናት ለመሳተፍ ፈቃደኛ ነዎት?

____አዎን ____አልፈልግም

ቀን _____ ቦታ _____

Annex 2: Summary of classification according to Goh (36) with the three parameters

Classification	Characteristic
Type: distance from fixed reference point (External urinary meats)	
1	Distal edge of fistula >3.5 cm from external urinary meats
2	Distal edge 2.5–3.5 cm
3	Distal edge 1.5–2.5 cm
4	Distal edge <1.5 cm
Size: largest diameter in centimeters	
A	<1.5 cm
B	1.5–3 cm
C	>3 cm
Special considerations	
I	None or mild fibrosis and/or vaginal length >6 cm, normal capacity
II	Moderate or severe fibrosis and/or marked reduction in Vaginal length and/or capacity
III	Special circumstances, e.g. post-irradiation, ureteric involvement, Circumferential fistula, previous repair

Declaration

I, the undersigned declare that this thesis is my original work in partial fulfillment of the requirement for the degree of Master of Public Health. I also declare that it has never been presented in this or any other university and that all resources and materials used in the thesis have been duly acknowledged.

Student Name: Birhanu Menber

Signature: _____

Place of submission: Addis Continental Institute of Public Health

Date of submission: _____

Thesis has been submitted for examination with my approval as a university advisor.

Advisor Name: _____

Signature: _____

Date of submission: _____